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DECOMMISSIONING OF DIVISION
OF MILITARY APPLICATION EQUIPMENT
AT RICHLAND OPERATIONS OFFICE
FOR PERIOD ENDING MARCH 31, 1975

Compiled by: Atlantic Richfield Hanford Company
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Research and Development Administration

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ARH-R-170 30

DECOMMISSIONING OF DIVISION OF MILITARY
APPLICATION EQUIPMENT AT RICHLAND OPERATIONS OFFICE

SCOPE

The scope of the decommissioning work provides for (1) the removal of all Division of Military Application (DH) fabrication and inspection equipment held in standby status in the 234-5Z Building, (2) disposition of all contaminated equipment and materials removed by packaging for 20-year retrievable storage, (3) reclamation of salvagable materials and equipment for use on site by other Energy Research and Development Administration contractors, and (4) restoration of cleared-out areas for other future Richland Operations Office programs.

INTRODUCTION

The decommissioning of the DMA facilities is under the management of Atlantic Richfield Hanford Company, utilizing the onsite Architect-Engineer (A-E) and the Cost Plus Fixed Fee (CPFF) construction service contractors. DMA equipment and support facilities required for the Richland Operations Office BB programs will be retained and transferred to that account. The estimated cost for the decommissioning work is \$2,219,000, with a 21-month completion schedule.

SUMMARY

Decommissioning of the DMA facilities is estimated at 40 percent complete compared to 45 percent forecast at the start of the program. Transfer of six Inspection Area glove boxes, 12 conveyor sections, and one A-Line glove box to 20-year retrievable storage has been completed. Counting of the A-Line glove boxes for plutonium content using a portable sodium iodide (NaI) gamma detector is continuing ahead of schedule. The removal of one of the C-Line glove boxes, HC-40D&B, was postponed until the indicated plutonium content of about one to two kilograms had been verified and cleanup completed to satisfy the 500 gram disposal limit mutually concurred on between ERDA-RL and ARHCO. Removal of appurtenances and services from the A-Line and C-Line fabrication glove boxes is estimated at 90 percent complete. The fiscal year 1975 cost through March 30, 1975 was \$711,178. Compiled with the \$118,307 expended in fiscal year 1974, the total DMA cost through the third quarter of fiscal year 1975 was \$829,485. The order for 51 Fiberglass Reinforced Polyester (FRP) plywood boxes to complete the program has been placed, which brought the overall expenditure and progress rate up to original forecasts.

WORK STATUS AND PROGRESS

The DMA equipment removal work is continuing on schedule with satisfactory progress. Six Inspection Line glove boxes and associated ventilation ducts have been sealed in 20-year retrievable storage boxes and transferred to the DMA transuranic storage trench. A total of 100 lineal feet of cross conveyor and main conveyor glove boxes serving the Inspection area have been removed, boxed and transferred to the transuranic storage trench. Only the section

-2-

of conveyor serving the 192-A and 192-B vaults remains, and will be removed as soon as the vaults are cleared of interfering plutonium standards and shipping containers. The blanked-off end of the conveyor that served the Inspection area glove boxes is shown in figure 1. One of the glove boxes removed and stored with temporary exhaust is to the left and the main exhaust (E-4) duct for conveyor is shown disconnected and blanked. Two glove boxes, HI-65S and HI-73E, remain to be loaded out into boxes, and presently are isolated with temporary exhaust until proper size boxes can be fabricated. The Sheffield gauge glove box, HI-62G, to be retained, has been isolated from the main conveyor line and equipped with a permanent exhaust and control damper. The future use for this glove box has not been ascertained.

Including the one 20-foot FRP box transferred to the retrievable storage last month, a total of 14 various-sized boxes and 19 drums have been placed in the DMA transuranic storage trench, representing a net weight of 85,900 pounds and a total residual plutonium content of 481 grams. The boxes occupy a trench storage volume of 13,300 cubic feet. The equipment used and method employed for loading, transporting and handling the FRP boxes are shown in figures 2, 3, 4, 5, 6, and 7. A 50,000 pound range dynamometer is shown in figure 2 which was used for weighing boxes. The lifting frame has alternate cable attachment points for variations in the center of gravity of filled containers. The Rocky Flats type FRP box and a standard Hanford Type I steel box used for transuranic storage are shown in figures 9 and 10.

The four remaining glove boxes in the A-Line area have had services and appurtenances removed for the past two months and remain attached to the main conveyor until storage boxes are available. The Floturn glove box, HA-27FT, has to be sectioned horizontally to permit removal from the building. This work was deferred until additional gamma counting could be completed to verify estimated residual plutonium content of 480 grams. This glove box has been submitted to ERDA-RL for approval to transfer unit to 20-year retrievable storage.

Work in the C-Line area has been centered on the mezzanine around the auxiliary ventilation and hydraulic equipment which served the machining glove boxes. A special hydraulically operated tool, manufactured by the Enerpac Corporation, has proved safe and effective in crimp-cutting of plutonium contaminated hydraulic and solvent lines. All of the hydraulic units have been removed and loaded into transuranic storage boxes. Six motors, ranging from seven and one-half to twelve horsepower, were salvaged and transferred to the Battelle Northwest equipment pool, along with several gear reducers and instruments removed earlier. The two small ingoting glove boxes, HC-26 and HC-27, and the remote weighing glove box, HC-25, have been

readied for removal from the main conveyor line. The greenhouse for containing the highly contaminated HC-26 and HC-27 vacuum pumps is shown in figure 8. These small glove boxes, along with the two machining filter boxes can be contained in one 16-foot FRP box, which will reduce total box requirements by two. Shoring of the tunnel beneath the C-Line access corridor has been completed, which will permit removal of the heavy C-Line equipment via the large south exit door.

All design work has been completed by Vitro Engineering. A sequential procedure for removal and storage of glove box HA-66TT, Addendum 2 of Vitro-R-297 Procedure, has been issued and included as an attachment.

Counting of the glove boxes and auxiliary equipment for residual plutonium holdup, using a portable sodium iodide gamma detector, now is ahead of schedule. Only one glove box, HC-40D&B, appears to have a high (one to two kilograms) plutonium content exceeding the established transuranic unit storage limit of 500 grams. One of the glove box viewing windows has been replaced for improved visibility, and the glove box turned over to Z Plant Operations for locating and recovering the plutonium. A significant amount of plutonium oxide has been located in a narrow space behind a storage pedestal and removal of plutonium has been held up until an approved handling procedure has been prepared and issued.

The low bid of \$155,428 by Shelby Reinforced Plastics Corporation of Pasco, Washington for fabrication and assembly of 51 FRP plywood boxes, has been approved by ERDA-RL, and contract awarded on March 24, 1975. Delivery of the boxes within the next three month period will be contingent on material deliveries to the fabricator.

PROBLEM AREAS

A letter requesting removal of additional DMA equipment originally retained for planned BB programs, has been submitted to ERDA-RL for approval by the Albuquerque Operations Office. An estimate prepared by Vitro Engineering indicates the cost will be \$200,000, excluding \$25,000 for FRP boxes required. It has been determined that there will be a sufficient number of boxes in the present order to satisfy the additional requirement as a result of selective loading of boxes to date and maximum utilization of space. Although it is not reflected in the estimate, it appears feasible to reduce the cost of this additional work by at least 50 percent if allowed to be done concurrently with work under way in the same general areas.

The green vinyl-coated, cloth-backed tape used volumiously for sealing contaminated packages has shown evidence of loosening after a few days following application. The manufacturer, Permacell Corporation, has been contacted and a substitute tape provided for evaluation. The new tape appears to have superior adhesion qualities based on a preliminary evaluation.

COST AND SCHEDULE

The total cost for fiscal year 1975 through March 30, 1975, is \$711,178, and includes \$459,298 for J. A. Jones Construction Company, \$69,712 for Vitro Engineering, and \$182,168 for miscellaneous Atlantic Richfield Hanford Company and Battelle Northwest services, including \$103,951 in ARHCO overhead and service charges. The placement of the purchase order for FRP plywood boxes and an increase in construction manpower has regained the anticipated expenditure rate with progress only five percent behind the original schedule. The average CPFF construction service cost, exclusive of box fabrication cost, now is averaging \$2,800 per day compared to \$1,900 per day the previous quarter, reflecting the increased construction effort. A summary of the DMA removal costs and a forecast of expenditures through the third quarter of FY 1976 is shown in figure 11.

INDEX OF FIGURES

<u>FIGURE</u>	<u>DESCRIPTION</u>
1	Blanked off conveyor that had served Inspection area glove boxes.
2	Dynamometer used for weighing transuranic storage boxes.
3	Lifting frame secured for removal of FRP box from flatbed truck.
4	Guy rope attached for positioning filled FRP box.
5	Filled FRP box being lowered in trench.
6	FRP box positioned in trench; lift cables being removed.
7	Final position of first FRP box placed in transuranic trench.
8	Plastic greenhouse for removal of contaminated vacuum pump systems - HC-26 and HC-27.
9	Rocky Flats type FRP box for transuranic storage.
10	Hanford Type I steel box for transuranic storage.
11	DMA cost status and estimate summary.

FIGURE 1

Blanked off conveyor that had served
Inspection Area glove boxes.

FIGURE 2

Dynamometer used for weighing trans-
uranic storage boxes.

FIGURE 3

Lifting frame secured for removal of
FRP box from flatbed truck.

FIGURE 4

Guy rope attached for positioning
filled FRP box.

FIGURE 5

Filled FRP box being lowered in trench.

FIGURE 6

FRP box positioned in trench; lift
cables being removed.

FIGURE 7

Final position of first FRP box
placed in transuranic trench.

FIGURE 8

Plastic greenhouse for removal of
contaminated vacuum pump systems -
HC-26 and HC-27.

FIGURE 9

Rocky Flats type FRP box for trans-uranic storage.

FIGURE 10

Hanford Type I steel box for trans-uranic storage.

COST STATUS AND ESTIMATE DMA EQUIPMENT REMOVAL

	<u>Actual Cost</u>	<u>Estimated Cost</u>	<u>Total Cost By Fiscal Year</u>
FY 1974	\$118,307	-----	\$ 118,307
FY 1975			
First Quarter	152,080	-----	
Second Quarter	215,216	-----	
Third Quarter	343,882	-----	
Fourth Quarter		\$368,822	1,080,000
FY 1976			
First Quarter		400,000	
Second Quarter		425,000	
Third Quarter		295,693	1,020,693*
TOTAL COST			<u>\$2,219,000</u>
PERCENT COMPLETE - 45			

*Includes \$200,000 for the removal of a portion of the DMA equipment originally retained for planned BB programs, and now deemed unnecessary. Two months lost time due to labor craft strikes in September and October 1974, along with the increased scope of work will extend the overall schedule by three months for a total of 21 months, with physical completion forecast by the end of February 1976.

Figure 11

CE0948

VITRO-R-311
Revision 1

SEQUENCE AND CHECK SHEETS FOR THE
DIVISION OF MILITARY APPLICATION (DMA) EQUIPMENT
REMOVAL FROM 234-5Z BUILDING

HC-Line Equipment

H. E. Adkins

H. C. Stahl

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February 1975

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For the U.S. Energy Research and Development Adm.

Contract No. AT(45-1)-1698

GENERAL OUTLINE FOR EQUIPMENT REMOVAL AND RETRIEVABLE STORAGE PROCEDURESHC INSPECTION LINE

1.0 PREPARATION OUTSIDE THE 234-5Z BUILDING

- 1.1 Move in temporary construction facilities.
- 1.2 Establish equipment storage areas.
- 1.3 Assemble required tools and equipment.
- 1.4 Assemble drums, storage boxes, and related storage containers.
- 1.5 Inform Operations organization of area being used.
- 1.6 Remove obstructions and surplus equipment from storage area and transport route.

2.0 PREPARATION INSIDE THE 234-5Z BUILDING

- *2.1 Obtain necessary work permits (RWP, welding, excavation, etc.). Post copies in work areas.
- 2.2 Establish equipment storage areas.
- 2.3 Establish location of power disconnects for electrical, hydraulic, pneumatic, etc.
- 2.4 Assemble required tools, equipment, and materials.
- 2.5 Perform radiation survey of work area.
- 2.6 Inform Operations organization of area where work will be done.
- 2.7 Remove obstructions and surplus equipment from storage area and transport route.

3.0 BUILDING PREPARATION

3.1 Structural and Shoring Changes

- 3.1.1 Access through inside structural walls.
- 3.1.2 Install shoring under Tunnel #6 (see Drawing H-2-25206).
- *3.1.3 Remove mezzanine at HC-19A&B, partition wall west of HC-24B, and other interfering partitions to facilitate glovebox and equipment removal. Operations approval is required.

3.2 Ventilation

- *3.2.1 No ventilation disconnects, removals, or reroutings are to be made without the presence and approval of ARHCO Ventilation Balancing personnel.
- 3.2.2 Maintain low pressure in area of equipment being removed.
- 3.2.3 Rebalance ventilation system to new conditions, if required.
- *3.2.4 Maintain ventilation control sensing lines and differential pressure gauge on gloveboxes until removed from main conveyor.

4.0 WORK AREA PREPARATION

- 4.1 Perform radiation survey of work area.
- *4.2 Disconnect or turn off services to specific gloveboxes, conveyors, or equipment being removed as directed and authorized by the plant Operations contact engineer.
 - *4.2.1 Electrical (Check all circuits to be sure they are deactivated prior to removal.)
 - 4.2.2 Pneumatic
 - 4.2.3 Hydraulic
 - *4.2.4 Water, chemical, and process lines
 - *4.2.5 Ventilation
- 4.3 Prepare area for work.
 - 4.3.1 Paper floor where required for contamination control.
 - *4.3.2 Erect air locks where required for ventilation or contamination control.
 - 4.3.3 Close doors and post signs to maintain traffic and ventilation control.

5.0 EQUIPMENT AND MATERIAL REQUIRED BEFORE STARTING TO REMOVE EQUIPMENT

- 5.1 Hand Tools
 - 5.1.1 Non-disposable
 - 5.1.2 Tools to be stored with equipment
- 5.2 Clean-Up Supplies
 - 5.2.1 Rags
 - 5.2.2 Vacuum cleaner
 - 5.2.3 Filters
- 5.3 Pallets
- 5.4 Protective Covers for Gloveboxes
- 5.5 Containment Barrels for Liquids
- 5.6 Blank-Off Plates and Gaskets
- 5.7 Rigging Equipment
- 5.8 Retrievable Storage Containers
 - 5.8.1 Regular 55-gallon steel drums
 - 5.8.2 Coated 55-gallon steel drums
 - 5.8.3 Fiberglassed plywood boxes
 - 5.8.4 Regular plywood boxes

- 9.4 Verify that tunnel shoring is in place where required on egress route.
- *9.5 Verify that specific equipment is approved for retrievable storage by ERDA-RL.
- 9.6 Transport equipment being removed to retrievable storage area.
 - 9.5.1 Slowly move over predetermined route to box loading area.
 - 9.5.2 Survey area passed over while equipment is being moved.
 - 9.5.3 Survey (sealed) equipment container at loading area.
- 10.0 EQUIPMENT STORAGE
 - 10.1 Pick up equipment and load into retrievable storage box.
 - 10.2 Seal retrievable storage box.
 - 10.3 Place equipment and/or retrievable storage box into retrievable storage trench.
 - 10.4 Radiation monitor all boxes.
 - 10.5 When retrievable storage trench becomes full or job is completed, cover with earth.
 - 10.6 Record retrievable storage location and other data on forms provided.

11.0 CLEAN UP AND REMOVE COLD EQUIPMENT

- 11.1 Remove and store electrical consoles and switch boxes associated with removed units.
- 11.2 Decontaminate all areas occupied by removed gloveboxes and equipment.
- 11.3 Survey and render area contamination free.
- 11.4 Chip contaminated concrete floor to depth of 2 inches and replace with new flooring materials.
- 11.5 Paint entire area where remodeling or equipment removal occurred.
- 11.6 Restore pits or holes in floor to grade using metal cover plates.

*Note: Refer to ARHCO Meeting Minutes No. DMA-2, dated Oct. 21, 1974, for special requirements for surveying and counting of all containers and equipment for plutonium accountability and safeguards prior to disposal.

CE0948

VITRO-R-286
Revision 1

SEQUENCE AND CHECK SHEETS FOR THE
DIVISION OF MILITARY APPLICATION (DMA) EQUIPMENT
REMOVAL FROM 234-5Z BUILDING

HI Line Equipment

H. E. Adkins

H. C. Stahl

February 1975

VITRO ENGINEERING • architects • engineers

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P. O. Box 296 . Richland, WA 99352 (509) 942-6053

For the U.S. Energy Research and Development Adm.

Contract No. AT(45-1)-1698

GENERAL OUTLINE FOR EQUIPMENT REMOVAL AND RETRIEVABLE STORAGE PROCEDURES

HI-INSPECTION LINE (ONLY)

1.0 PREPARATION OUTSIDE OF THE 234-5-Z BUILDING

- 1.1 Establish Equipment Storage Areas
- 1.2 Assemble Required Tools and Equipment
- 1.3 Radiation Survey of Storage Area
- 1.4 Verify Weather Suitable for Outside Packaging
- *1.5 Inform Operations Organization of Area Being Used
- 1.6 Remove Obstructions and Surplus Equipment from Storage Area and Transport Route

2.0 PREPARATION INSIDE OF THE 234-5-Z BUILDING

- *2.1 Obtain necessary work permits (RWP, welding, excavation, etc.). Post copies in work areas.
- 2.2 Establish Equipment Storage Areas
- 2.3 Establish Location of Power Off for Electrical, Hydraulic Pneumatic, Etc.
- 2.4 Assemble Required Tools and Equipment
- 2.5 Radiation Survey of Storage Area
- *2.6 Inform Operations Organization of Area where work will be done
- 2.7 Remove Obstructions and Surplus Equipment from Storage Area and Transport Route

3.0 BUILDING PREPARATION

- 3.1 Structural and Shoring Changes
 - *3.1.1 New Exit (Exterior wall opening with new security doors)
- 3.2 Ventilation
 - *3.2.1 No ventilation disconnects, removals, or reroutings are to be made without the presence and approval of ARHCO Ventilation Balancing personnel.
 - 3.2.2 Maintain low pressure in area of equipment being removed.
 - 3.2.3 Install new air locks where necessary to allow removal to exterior retrievable storage boxes or storage area.
 - 3.2.4 Re-balance ventilation system to new conditions if required.
 - *3.2.5 Maintain ventilation control sensing lines and differential pressure gauges on gloveboxes until removal from main conveyor.
- 3.3 Contamination--Perform radiation survey of removal paths inside building

* As revised (3.1.2 was deleted).

4.0 WORK AREA PREPARATION

- 4.1 Perform radiation survey of work area.
- *4.2 Disconnect or turn off services to specific gloveboxes, conveyors, or equipment being removed as directed and authorized by the plant Operations contact engineer.
 - *4.2.1 Electrical (Check all circuits to be sure they are deactivated prior to removal.)
 - 4.2.2 Pneumatic
 - 4.2.3 Hydraulic
 - *4.2.4 Water, chemical, and process lines
 - *4.2.5 Ventilation
- 4.3 Prepare Area for Work
 - 4.3.1 Cover floor
 - 4.3.2 Erect air flow barriers
 - 4.3.3 Erect working signs
 - 4.3.4 Lock or close doors to maintain traffic control
 - 4.3.5 Bring in required additional building services (if required)
 - 4.3.5.1 Electrical
 - 1. 110 VAC
 - 2. 220 VAC (single or three-phase or both)
 - 3. 440 VAC (single or three-phase or both)
 - 4.3.5.2 Water
 - 4.3.5.3 Hydraulic fluids other than water
 - 4.3.5.4 Compressed air
 - 4.3.5.5 Heat and Cooling
 - 4.3.6 Install additional lighting (if required)

5.0 EQUIPMENT AND MATERIAL REQUIRED BEFORE STARTING TO REMOVE EQUIPMENT

- 5.1 Hand Tools
 - 5.1.1 Non-disposable
 - 5.1.2 Tools to be stored with equipment
- 5.2 Clean-Up Supplies
 - 5.2.1 Rags
 - 5.2.2 Vacuum cleaner
 - 5.2.3 Filters
- 5.3 Pallets
- 5.4 Protective Covers
- 5.5 Containment Barrels for Liquids

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7.0 PREPARATION PRIOR TO MOVING EQUIPMENT OR INSTALLING BLANKING PLATES (Continued)

- 7.5 If Possible, Crimp Lines to Seal in Contamination
- 7.4 Cut Lines to be Removed
- 7.7 If Removed Line Is Not Sealed, Cap with Plastic Caps and Tape Tight
- 7.8 Install Blanking Plate Where Line Was Removed
- 7.9 Place in Containment Bags and Seal

8.0 EQUIPMENT TRANSPORT

- *8.1 Verify That all Obstructions Have Been Removed from Equipment Being Moved and That Specific Equipment is Approved for Retrievable Storage by ERDA-RL.
- 8.2 Install Blanking Plates
 - 8.2.1 Install containment barrier (plastic) around opening to be blanked. Blanking plate shall be inside barrier.
 - 8.2.2 Install rigging in position to lift equipment
 - 8.2.3 Remove bolts, holding duct to equipment (glovebox, etc.)
 - 8.2.4 Lift duct and separate sufficiently to allow the installation of blanking plates onto duct and equipment openings (Care must be taken to guarantee that contamination barrier is not violated.)
 - 8.2.5 Set duct onto stable support
 - 8.2.6 Install blanking plates onto duct and equipment
 - 8.2.7 Radiation survey of blanked ends of ducts and equipment
 - 8.2.8 Remove containment barriers enclosing blanked area
- 8.3 Move Equipment Onto Pallet
 - 8.3.1 Lift equipment being removed so that a containment barrier can be positioned to completely enclose equipment being removed
 - 8.3.2 Install and seal containment barrier
 - 8.3.3 Test to guarantee seal on containment barrier
 - 8.3.4 Swing removed equipment over pallet
 - 8.3.5 Slowly lower equipment onto pallet being careful to maintain seal on containment barrier
- *8.4 Transport Equipment Being Removed to Retrievable Storage Area (Ventilation Balancing direction and approval required before opening exit doors)
 - 8.4.1 Install protective covering over equipment and pallet to be moved
 - 8.4.2 Raise pallet from floor and slowly guide over predetermined route to retrievable storage area
 - 8.4.3 Maintain radiation survey on removed equipment and area passed over while equipment is being moved
 - 8.4.4 Radiation survey of contained (sealed) equipment

9.0 EQUIPMENT STORAGE

- 9.1 Move Equipment to Retrievable Storage Box and Load into Retrievable Storage Box
- 9.2 Seal Retrievable Storage Box
- 9.3 Place Equipment and/or Retrievable Storage Box into Retrievable Storage Trench
- *9.4 Survey All Boxes for Contamination
- 9.5 When Retrievable Storage Trench Becomes Full, or Job is Completed, Cover With Earth
- 9.6 Radiation Survey of Area
- 9.7 Record Retrievable Storage Location and Other Data

10.0 CLEAN UP AND REMOVE COLD EQUIPMENT

- *10.0 Remove and Salvage Electrical Equipment and Hardware Associated with Removed Units
- 10.2 Decontaminate All Areas Occupied by Removed Gloveboxes
- 10.3 Survey and Render Area Contamination Free
- 10.4 Chip Contaminated Flooring to Depth of 2 Inches and Replace with New Flooring Materials
- 10.5 Paint Entire Area Where Remodeling or Equipment Removal Occurred

*Note: Refer to ARHCO Meeting Minutes No. DMA-2, dated Oct. 21, 1974, for special requirements for surveying and counting of all containers and equipment for plutonium accountability and safeguards prior to disposal.

* As revised (10.2 and 10.3 were deleted).

CHECK SHEET FOR HI-61 REMOVAL (Continued)

- 2. Bleed off air pressure (if required). []
- 3. Cap or seal all lines of equipment or support equipment. []

IV. Blanking Requirements:

Blank off with blanking plate and tape shut radiation survey performed. []

Interfaces:

- *. Balance and Top HI-61 Assembly (2) (Notify plant instrument personnel before removing balance for special handling procedure.) []
- Possible interface between upper and lower units (2) []
- Conveyor Blanking((2) []

Interface considerations:

- 1. Prepare blanking plate(s). []
- 2. Prepare gaskets. []
- 3. Install blanking plates. []

V. Strip Down Procedure

NOTE: Radiation survey to be performed after removal of each item. []

A. Appurtenance removal

- 1. Remove all units that do not penetrate glovebox or equipment. Radiation survey performed. []
- 2. Remove all units that penetrate glovebox or equipment (if safe). Radiation survey performed. []

B. Lead

Remove lead sheets from surfaces of equipment. Radiation survey performed. []

C. Glass

Remove leaded glass sheets from surfaces of equipment. Radiation survey performed. []

D. Anchor Bolts

- 1. Remove or loosen anchor bolts. []
- 2. Fabricate and install temporary supports for equipment support to facilitate removal of legs. []

CHECK SHEET FOR HI-64 (Continued)

2. Remove all units that penetrate glove box or equipment (if safe). Radiation survey performed. []

3. Blank off with blanking plate and tape shut. Radiation survey performed. []

B. Lead (if applicable)

Remove lead sheets from surfaces of equipment. Radiation survey performed. []

C. Glass

Remove leaded glass sheets from surfaces of equipment. Radiation survey performed. []

D. Anchor Bolts

1. Remove or loosen anchor bolts. []

2. Fabricate and install temporary supports for equipment support to facilitate removal of legs. []

3. Install rigging in position to lift equipment. []

4. Prepare ducting for disconnection from equipment and shore up as required to hold position. []

5. Enclose equipment area of item to be removed in plastic film. Allow adequate looseness of cover to facilitate other additional removal requirements. []

VI. Base or airlock removal requirements:

Legs (10) need to be cut off. []

VII. Special precautions:

A. Disconnect ducting to equipment (ventilation) and blank off. Lift ducting to facilitate blanking installation. []

CAUTION: Care must be taken to guarantee that contamination barrier is not violated.

B. Perform radiation survey of blanked ends of ducting. []

VIII. Estimated weight: 3000 lb []

IX. Accountable Equipment: []

"F" Numbers: _____

CHECK SHEET FOR HI-74 (Continued)

2. Remove all units that penetrate glovebox or equipment.
Radiation survey performed. []
3. Blank off with blanking plate and tape shut. Radiation
survey performed. []
- B. Lead
Remove lead sheets from surfaces of equipment. Radiation
survey performed. []
- C. Glass
Remove leaded glass sheets from surfaces of equipment.
Radiation survey performed. []
- D. Anchor Bolts
 1. Remove or loosen anchor bolts. []
 2. Fabricate and install temporary supports for equipment
support to facilitate removal of legs. []
 3. Install rigging in position to lift equipment. []
 4. Prepare ducting for disconnection from equipment and
shore up as required to hold position []
 5. Enclose equipment area of item to be removed in plastic
film. Allow adequate looseness of cover to facilitate
other additional removal requirements. []
- *VI. Base or airlock removal requirements: (see VITRO-R-286, Addendum 1,
for special procedure to Section HI-74).
 - Loadout Section--cut off support legs. []
 - Storage and Elevator Section--cut off support legs. []
 - Elevator Lift Cyclinder--remove and replace flooring. []
 - E-4 System--blank off (conveyor). []
- VII. Special precautions:
 - A. Disconnect ducting to equipment (ventilation) and blank off.
Lift ducting to facilitate blanking installation. []
 - CAUTION: Care must be taken to guarantee that contamination
barrier is not violated.
 - B. Perform radiation survey of blanked ends of ducting. []
- VIII. Estimated weight: 7000 lb []